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GRADING FOR TOBACCO SEEDS FOR
OIL MILLING

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GRADING FOR TOBACCO SEEDS FOR OIL MILLING

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Indian Standard

GRADING FOR TOBACCO SEEDS FOR OIL MILLING

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 5 May 1977, after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Chemical Division Council and the Agricultural and Food Products Division Council.

0.2 Tobacco seeds are obtained from the plant *Nicotiana tabacum* Linn. and *Nicotiana rustica* Linn. both belonging to fam. Solanaceae. India is one of the largest producers of tobacco in the world. Since the plant is essentially cultivated for the production of leaves, the production of seeds is limited to that required for growing the leaf tobacco. As per present practice only about 50 percent of the flue cured Virginia tobacco growing areas remain untopped producing the seeds as by-product and from the remaining 50 percent, seed heads are removed (topped) before maturity for production of special types of tobacco leaf. In order to encourage full utilization of the seeds thus made available formulation of this standard has been taken up by the concerned technical committee.

0.3 The oil obtained from tobacco seeds is covered in IS:5614-1970*. Tobacco seed oil is used at present in the manufacture of non-yellowing, oil-modified alkyd resins, soap, etc. The refined tobacco seed oil is used in many countries for edible purposes. Its use for edible purposes in this country is still subject to approval by the Government of India.

0.4 In the preparation of this standard substantial assistance has been derived from the data supplied by Khadi and Village Industries Commission, Bombay; and Oil Technological Research Institute, Anantapur; which is thankfully acknowledged.

0.5 This standard contains clause 5.1 which calls for agreement between the purchaser and the supplier.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the

*Specification for tobacco seed oil.

†Rules for rounding off numerical values (revised).

rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes methods of grading and requirements for tobacco seeds for oil milling, along with methods of sampling and test.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given under 2 of IS : 3579-1966* shall apply.

3. GRADES

3.1 The tobacco seeds shall be of two grades, namely, Grade 1 and Grade 2.

4. REQUIREMENTS

4.1 The material shall be derived from the plants of tobacco *Nicotiana tabacum* Linn. and *Nicotiana rustica* Linn. both belonging to fam. Solanaceae. The material shall be clean.

4.2 The material shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR TOBACCO SEEDS FOR OIL MILLING

| SL No. | CHARACTERISTIC | REQUIREMENT FOR | | METHOD OF TEST (REF TO CL NO. IN IS : 3579-1966*) |
|--------|---|-----------------|---------|--|
| | | Grade 1 | Grade 2 | |
| (1) | (2) | (3) | (4) | (5) |
| i) | Damaged, slightly damaged weevilled and dark seeds, percent by mass, <i>Max</i> | To be reported | | 4 |
| ii) | Impurities, percent by mass, <i>Max</i> | 5 | 8 | |
| iii) | Other oilseeds, percent by mass, <i>Max</i> | To be reported | | |
| iv) | Shrivelled, immature and dead seeds, percent by mass, <i>Max</i> | To be reported | | |
| v) | Total of Items (i) to (iv) | 5 | 10 | — |
| vi) | Moisture content, percent by mass, <i>Max</i> | 5 | 5 | 5.1 |
| vii) | Oil content, percent by mass, <i>Min</i> | 37 | 32 | 5.2 |
| viii) | Acid value of extracted oil, <i>Max</i> | 6 | 8 | 5.3 |

*Methods of test for oilseeds.

*Methods of test for oilseeds.

5. PACKING

5.1 The material shall be packed in clean, dry, sound, single, new or unmodified hessian bags in merchantable condition, as agreed to between the purchaser and the supplier.

6. MARKING

6.1 The material shall be marked with the following particulars:

- a) Name and grade of the material,
- b) Net mass,
- c) Year of the crop, and
- d) The source of supply.

7. SAMPLING

7.1 Representative samples of the material shall be drawn as prescribed in IS : 4115-1967*.

8. TESTS

8.1 Tests shall be carried out as prescribed in IS : 3579-1966†. Reference to the relevant clauses of that standard is given in col 5 of Table 1.

8.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1960‡) shall be employed in the tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Methods of sampling of oilseeds.

†Methods of test for oilseeds.

‡Specification for water, distilled quality (*revised*).

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INDIAN STANDARDS

ON

OILS AND FATS AND RELATED MATERIALS

IS :

- 75-1973 Linseed oil, raw and refined (*second revision*)
- 435-1973 Castor oil (*second revision*)
- 542-1968 Coconut oil (*second revision*)
- 543-1968 Cottonseed oil (*second revision*)
- 544-1968 Groundnut oil (*second revision*)
- 545-1968 *MAHUA* oil (*second revision*)
- 546-1975 Mustard oil (*second revision*)
- 547-1968 Sesame oil (*second revision*)
- 548 (Part I)-1964 Methods of sampling and test for oils and fats : Part I Methods of sampling, physical and chemical tests (*revised*)
- 548 (Part II)-1976 Methods of sampling and test for oils and fats : Part II Purity test (*third revision*)
- 595-1956 Blown rape (or mustard) oil for use in lubricants
- 877-1971 Methods of sampling and test for activated carbon used for decolorizing vegetable oils and sugar solution
- 887-1968 Animal tallow (*first revision*)
- 1035-1972 Methods of sampling and test for bleaching earths (*second revision*)
- 1675-1971 Stearic acid, technical (*first revision*)
- 1676-1960 Oleic acid, technical
- 1780-1961 Vegetable tallow
- 1796-1960 Crude glycerine and refined glycerine
- 1965-1971 Bleaching earth of Indian origin used for decolorizing vegetable oils (*first revision*)
- 3448-1968 Rice bran oil (*first revision*)
- 3470-1966 Hexane, food grade
- 3490-1965 Nigerseed oil
- 3491-1965 Safflower oil
- 3492-1965 *KARANJA* oil
- 3579-1966 Methods of test for oilseeds
- 4054-1966 Neatsfoot oil
- 4055-1966 Maize (corn) oil
- 4056-1966 Fish oil for leather industry
- 4088-1966 *KUSUM* oil
- 4115-1967 Methods for sampling of oilseeds
- 4276-1976 Soybean oil (*first revision*)
- 4277-1975 Sunflower oil (*first revision*)
- 4427-1967 Grading for groundnut kernels for oil milling and for table use
- 4428-1967 Grading for mustard seeds for oil milling
- 4429-1967 Grading for sesame seeds for oil milling
- 4617-1968 Grading for linseed for oil milling

IS :

- 4618-1968 Grading for castor seeds for oil milling
- 4619-1968 Grading for *MAHUA* kernels for oil milling
- 4620-1968 Grading for cotton seeds for oil milling
- 4765-1975 *NEEM* kernel and depulped *NEEM* seed oil (*first revision*)
- 5292-1969 Grading for safflower seeds for oil milling
- 5293-1969 Grading for niger seeds for oil milling
- 5294-1969 Grading for *KUSUM* seeds for oil milling
- 5614-1970 Tobaccoseed oil
- 5637-1970 Watermelon seed oil
- 5638-1970 Acid oil (cottonseed and groundnut)
- 5686-1970 Code of practice for handling and storage of oilseeds
- 6220-1971 Grading for copra for table use and for oil milling
- 7375-1974 Salseed fat
- 7787-1975 Grading for *NEEM* kernels and depulped *NEEM* seeds for oil milling
- 7797-1975 Grading for soybean for oil milling
- 7798-1975 Grading for sunflower seeds for oil milling
- 8323-1977 Palm oil
- 8361-1977 Palmolein